Resources for your

99/4A Home Computer

on the Internet

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Introduction

You are probably already pretty familiar with our little TI-99/4A computer. You know that you can use TI-Writer to do word processing, or play a game of Parsec. You know that we can use 80 column devices, connect to color printers, use hard drives, and connect to MIDI keyboards. But did you also know that we also have a wealth of resources available to us via the Internet? That's right! That global network of computers and computer users is something that 4A owners can also take advantage of. And many of us already are!

Currently, there are FTP sites offering 4A and Geneve files to download, there are sites on the Worldwide Web that we can browse with our PCs, and there is at least one email mailing list devoted to the TI. There are at least 10 really good web sites or pages devoted to our trusty little machine. But how to find it? How to use it?

This little booklet will outline the Internet resources available to 4A and Geneve users worldwide. Keep in mind that due to the volatility of the Internet and its resources, some of these may no longer be available while new ones keep popping up.

We will also briefly describe what is needed to connect the TI to the Internet, and what the future may hold for 99ers on the 'net. To make things as simple as possible, I will assume a few things:

1) You have a 4A but are using an IBM compatible or Macintosh for your primary Internet access.

2) You are somewhat comfortable with telecommunications software.

We make these assumptions for many reasons. First of all, there's no way I can go into detail on how to use TI telecommunications software. I personally don't use it, and most of it is shareware anyway. You're supposed to pay for it to get documentation!

I also simply don't have the space to devote to explaining in any detail what the Internet is or how to use it on a "modern" computer. This booklet is aimed directly at listing Internet resources available to my fellow 99ers. If you need help with using the Internet in general, I strongly urge you to read a book on this subject ***first.***

I have enlisted the help of a number of fellow 99ers in the creation of this guide and have also used many online resources to help me compile it. Any material not mentioned as being written by someone else was written by me. All reproduced materials are used with permission. Feel free to reproduce any portion of this guide, just make sure you give credit where credit is due!

Getting Connected

Connecting to the Internet can be easy or frustratingly difficult. If you are using an IBM-compatible or a Mac, contact your local Internet Service Provider (ISP). They can give you all the details and help you need.

Unfortunately, there are few (if any) ISPs that know anything about the 4A. True ISPs are geared towards the modern computer, and not our classic machine. If you are looking for an ISP so that you can connect your TI to the Internet, here are some things to look for:

Access to Internet email. This will allow you to send email to other 99ers and let you join the TI Mailing List.

- No TCP/IP required. Most true Internet Service Providers serve as a link between your computer and the Internet. Actually connecting to most Internet resources requires the use of a TCP/IP stack. This is software that lets a computer talk to Internet resources. Unfortunately, there is no such software for the TI. This means that, for the time being, 99/4As cannot use FTP or the Worldwide Web.

- Text based. Most true ISPs expect you to provide your own software. All they do is provide the link to the Internet. Most bulletin board services still used a text-based front end, complete with menus.

- Freenets. If your provider gives you access to the Freenet system, you have access to Internet email and Usenets (newsgroups). Freenet is text-based, which suits our TIs perfectly.

There is lots of telecommunications software available for the TI. You could use the Terminal Emulator II cartridge or disk-based software, such as Telco, Port, and others.

The maximum speed you can connect to on a TI is 9600 bps. However, there isn't much software that supports 9600 and the connection may not be reliable. 4800 is about as fast as a TI can communicate reliably.

Below is a listing of BBS's that offer Fidonet's TI Echo Conference. They may also offer Internet email, making them great resources if you want to use your 4A for serious telecommunications.

BBS Listing For BBS's Offering Fidonet's TI Echo Conference

By John Van Weelie - President 9T9 Toronto U. G.

September 9, 1995
Revised: April 7, 1996

This is a list of IBM Systems running BBS's that offer the TI Echo Conference from Fidonet. The intention of the list is to allow TI Users to find a BBS that carries TI Echo. This list was check against the Fidonet Nodelist for September 1, 1995.

This list is intended to be in the "PUBLIC DOMAIN". While I plan to maintain this list until it becomes impossible or impractical to do so it is you, the users and sysops, who are responsible for notifying me of additions, deletions or corrections. You may contact me on TI ECHO, GEnie, or at home.

58 Lowrey Avenue North TIECHO : John Van Weelie (1:221/177)
Cambridge, Ontario : John Vanweelie (1:123/50)
N1R-5A3 Internet : jvweelie@mgl.ca (perferred)
CANADA

City	ST	BBS Name	Phone #	BPS	Fido Node
Calgary	*AB	Logical Solutions	403-299-9925	14.4	1:134/10
Calgary	*AB	Excess	403-285-7338	28.8	1:134/17
Stony Plain	*AB	Power Station BBS	403-963-1859	28.8	1:342/5
Little Rock	AR	The Deserted Island	501-224-1605	28.8	1:3821/6
Little Rock	AR	The Deserted Island	501-224-7887	14.4	1:3821/6
Port Coquitlam	*BC	Sound Stage BBS	604-944-6476	28.8	1:153/7070
Aptos	CA	Ben's Bulletin Board	408-689-9028	14.4	1:216/111
Mission Viejo	CA	Orange Co. South	714-951-5282	28.8	1:103/900
Mission Viejo	CA	Digital Forest	714-586-6142	14.4	1:103/925
Napa	CA	Electronic Grapevine	707-257-2338	14.4	1:161/910
Ontario	CA	Diamond Bar BBS	909-599-2578	28.8	1:218/1001
Santa Clarita	CA	Mountain Peaks BBS	805-298-0221	28.8	1:102/924
Walnut	CA	Weapon's Vault	909-595-0131		1:218/809
Fort Lupton	CO	NCC-1701 Enterprise	303-785-0217	14.4	1:104/769
New London	CT	Computer Caddie	860-405-1603	28.8	1:320/118
Cape Coral	FL	CSPI-ONE (PRIV)	941-542-5482	96HST	1:371/6
Cape Coral	FL	CSPI-TWO	941-574-4707	96	1:371/1302
Cape Coral	FL	CSPI-THREE	941-542-5482	24	1:371/1304
Jacksonville	FL	Cowford Cargo Cult	904-384-6021	14.4	1:112/98
Margate	FL	Techlands	305-971-0130	14.4	1:369/55
Tampa	FL	Logic Gate	813-831-8125	14.4	1:377/49
Titusville	FL	CompuTrac	407-268-0216	28.8	1:374/2
Valrico	FL	Software Heaven	813-653-0431	28.8	1:377/41
Albany	GA	OS/2 Tower	912-439-4054	14.4	1:3617/12
Albany	GA	OS/2 Tower	912-439-4228	28.8	1:3617/13
Atlanta	GA	Atlanta Information	770-939-6641	28.8	1:133/7
Statesboro	GA	Statzbbs	912-489-1961	14.4	1:3626/9
Bolingbrook	IL	FamilyNet EchoGate	708-739-0033	14.4	1:115/887
Chicago	IL	#1 T.I. Support BBS	708-755-1847	28.8	1:115/847
Richton Park	IL	Computer Room	708-748-7449	14.4	1:115/748
Greenfield	IN	Communicator BBS	317-462-1952	14.4	1:231/930
Michigan City	IN	Short Circuit	219-872-9590	28.8	1:230/14
Richmond	IN	Skydive City	317-966-8337	28.8	1:2255/130
South Bend	IN	NJSP HighSchool	219-896-2046	28.8	1:227/129.600
Rineyville	KY	Insane Asylum	502-769-3790	14.4	1:2450/140
New Iberia	LA	Far Point Station	502-686-9570	28.8	1:3803/11

New Orleans	LA	Bowling Alley	504-887-2838	28.8	1:396/22
Weymouth	MA	BCS TI BBS	617-331-4181	96	1:101/610
Winnipeg	*MB	Tech Talk Toll	204-269-7373	14.4	1:348/105
Winnipeg	*MB	Muddy Waters CS	204-231-4504	14.4	1:348/206
Fort Washington	MD	Computer Orphanage	301-292-7955	14.4	1:109/412
Great Mills	MD	Hafa Adai Exchange	301-994-9460	14.4	1:2612/114
Great Mills	MD	Hafa Adai Exchange	301-994-9462	28.8	1:2612/115
Joppstowne	MD	Insomnia	410-679-5642	28.8	1:261/1302
Chaska	MN	Black Hole BBS	612-442-6429	96	1:282/4070
House Springs	MO	Night Owl	314-942-4758	14.4	1:100/570
St. Louis	MO	MDC-RCC	314-830-4287	14.4	1:100/10
St. Louis	MO	Fido's Puppy	314-830-2272	14.4	1:100/210
St. Louis	MO	Travel Online	314-561-3874		1:100/635
Ocean Springs	MS	WinQuest PC	601-875-6530	28.8	1:3604/90
Great Falls	MT	Genesis BBS	406-761-2434	28.8	1:3400/2
Raleigh	NC	TI-Raleigh	919-833-3412	14.4	1:151/114
Saxapahaw	NC	Dougs Dungeon BBS	910-376-6966	28.8	1:3644/15
State Road	NC	The Chicken House	910-957-4307	28.8	1:3663/102
Morganville	NJ	Comming Attractions	908-972-8583	14.4	1:107/108
Clovis	NM	Memory Alpha	505-784-5455	14.4	1:318/3
Las Vegas	NV	The Spider's Web	702-647-5989	14.4	1:209/274
Utica	NY	W.A.A. BBS	315-797-3054	28.8	1:2609/507
Utica	NY	W.A.A. BBS	315-797-3923	14.4	1:2609/508
Canton	OH	CanCom BBS	216-477-4504	28.8	1:157/629
Columbus	OH	Thunderware	812-526-2629	28.8	1:231/1310
Hillsboro	OH	The Connection 2	513-393-0261	14.4	1:2350/1
Hillsboro	OH	The Connection	513-393-0075	28.8	1:2350/200
Kent	OH	Ghetto BBS	216-673-6233	28.8	1:2215/421
Bartlesville	OK	Circuit Board BBS	918-333-1194	28.8	1:3815/104
Guthrie	OK	VISTA	405-282-2097	14.4	1:147/107
Oklahoma City	OK	Bare Metal BBS	405-842-3158	28.8	1:147/76
Okmulgee	OK	The South Forty	918-756-7006	28.8	1:170/257
Tulsa	OK	Hurricane Alley	918-836-0531	28.8	1:170/213
Kitchener	*ON	K-W Amateur Radio	519-578-9314	28.8	1:221/177
Peterborough	*ON	KCC BBS	705-748-0023	14.4	1:253/122
Eugene	OR	The KEEP BBS	503-342-5196	28.8	1:152/64
Portland	OR	Abomination BBS	503-288-5443	28.8	1:105/34
Portland	OR	Cyber Town Center	503-771-3747	14.4	1:105/34.161
Portland	OR	Death Lord's Realm	503-297-2911	28.8	1:105/91
Dalton	PA	Star Base 18414	717-563-6272	14.4	1:268/366
Harrisburg	PA	Pennsylvania Online	717-657-8699	96	1:270/101
Harrisburg	PA	Pennsylvania Online	717-657-9378	28.8	1:270/102
Harrisburg	PA	Pennsylvania Online	717-657-9785	96HST	1:270/103
Phoenixville	PA	Castrovalva BBS	610-917-0380	28.8	1:2626/102
Telford	PA	Channel Surfer	215-257-7888	28.8	1:2614/710
Uniontown	PA	Baud Bandit	412-439-2487	28.8	1:2615/14
Providence	RI	Eagle's Nest	401-621-4624	28.8	1:323/150
Easley	SC	Ryan Express	803-850-6257	28.8	1:3639/46
Irmo	SC	Swap Shop	803-695-7670	28.8	1:376/14
Irmo	SC	Why Knott	803-732-0326	28.8	1:376/94
Soiux Falls	SD	Multi-Verse	605-332-3191	28.8	1:288/7
Sioux Falls	SD	Dakota Infonet	605-336-3578	96	1:288/7.4
Memphis	TN	9640*NEWS BBS	901-368-0112	14.4	1:123/50
Soddy Daisy	TN	Keevah's Castle	423-332-4598	14.4	1:362/714
Abilene	TX	Seventh Heaven	915-698-6611	14.4	1:392/20
Allen	TX	Hi Tech Red Neck	214-727-9468	28.8	1:124/7018
Dallas	TX	High Tech BBS	214-754-4949	28.8	1:124/6305
Dallas	TX	High Tech BBS	214-867-7481	28.8	1:124/6306
Dallas	TX	Infinite Archives	214-484-6296	28.8	1:124/8010
Euless	TX	Contrails BBS	817-355-9242	28.8	1:130/83
Flower Mound	TX	Texas Hot Air BBS	214-539-3767	28.8	1:124/8057
Fort Worth/Dallas	TX	Contrails BBS	817-571-3424	28.8	1:130/83
Fort Worth	TX	Obscured by Clouds	817-731-1754	28.8	1:130/35
Houston	TX	PSL OnLine	713-442-6256	96	1:106/6256
Plano	TX	Thorne's Castle	214-422-1589	14.4	1:124/6522
Plano	TX	Zeitgeist	214-403-9175	28.8	1:124/5148
Stafford	TX	Pegasus OnLine	713-499-1857	14.4	1:106/1857
Milwaukee	WI	WRFM line #1	414-352-6176	96	1:154/414
Milwaukee	WI	WRFM line #2-4	414-351-1823	24	1:154/415
Oostburg	WI	Pirate's Cove	414-564-2694	14.4	1:154/169
Port Washington	WI	Harborside BBS	414-284-6108	28.8	1:154/284

Note: Asterisk [*] before ST abbreviation denotes a Canadian BBS.

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Gary Cox has written an article on the subject of getting a 4A on the Internet.

TI99/4a and the Internet

by Gary W. Cox

Recently I was asked, can the TI99/4a access the Internet? Here is the answer to that question!

First of all what is the Internet? Many people misunderstand exactly what the Internet is... Basically speaking the Internet is just like a the telephone company as the Internet is just a medium for communications. The Internet is really just a local area network with the local area being Earth itself! The Internet is simply a collection of host computers connected VIA a network called the Internet.

Host computers (or servers) on the Internet provide whatever service that the designer desires. Some systems on the Internet are available whereby someone can "Telnet" into a system therefore "logging" onto a system the same as someone would log onto a BBS or any other computer system. Using Telnet is somewhat like using your own system as a "dumb terminal" and you log into someone else's system and use whatever functions that your access level allows. Also available on the Internet are USENET groups which are basically large discussion areas where people post messages... EVERY subject imaginable is covered in USENET groups. EMAIL is a big part of the Internet as by logging into a host system such as Compuserve, Genie, Delphi etc... EMAIL can be sent and received to anyone anywhere on the Internet. FTP (File Transfer Protocol) is another service available where I can request a file from another system to mine. Telnet, USENET groups and EMAIL all can be obtained VIA a TI99/4a and 2400 baud modem VIA a "text only" interface. I haven't tested FTP access with the TI99/4a. However, the Internet provider used with the TI99/4a must provide a "text only" interface. A service such as America Online requires America Online software to access their service and thus can NOT be accessed using a terminal program (such as Fast Term, Telco, Mass- Transfer etc...) and therefore can not be used with a TI99/4a or Geneve computer. Compuserve provides a text interface to their service but on the Internet side Compuserve only provides for Telnet, USENET groups and EMAIL. Delphi provides a little more in the way of "text only" interface to the Internet as WEB pages can be accessed VIA a "text only" interface.

What are WEB pages? WEB pages are where the bulk the activity on the Internet occurs. WEB pages are usually graphics oriented pages accessed through the use of a WEB browser such as Netscape (for Pc's and Apple's). A WEB browser simply translates HTML (Hyper Text Markup Language) codes into a mixture of graphics and text on the screen. WEB pages are the addresses that are often seen listed on Television in the format: HTTP://address.com . HTTP stands for Hyper Text Transfer Protocal relating back to the HTML codes.

Most WEB pages are written with graphics in mind so accessing a WEB page with a "text only" interface will not only look terrible but will be missing the graphics. To actually view a graphic WEB page not only must a system have a display capable of 640 by 480 resolution (VGA) but a system capable of displaying 256 colors and the minimum modem speed necessary is 14,400 although a 9600 might work if you want to take a nap, a 2400 modem to view a WEB page in graphics mode is completely unusable! Note that a standard TI99/4a will only operate at a maximum modem speed of 2400 baud. So using a TI99/4a VIA a "text only" interface to view a WEB page is barely useable at best and is defiantly not recommended. This limitation extends also to IBM PC's, XT's, AT's, 286's, Commodore, Atari's and even a 386 system with VGA is barely capable of using Netscape as Netscape requires "Windows" and Windows requires a fast system, memory etc... Generally speaking a 486 with VGA is the minimum necessary to view WEB pages. So if you want to view these WEB pages you will need something a more powerful than a TI99/4a although you can view the non-graphics text located in those pages with a TI99/4a or Geneve 9640...

Therefore, in order to connect to the Internet a system must first connect to a host such as an Internet provider. Many businesses have their own Internet connections and host system but having your own direct connect to the Internet is expensive and impractical for home and small business users. Most people must go through an Internet provider to get onto

the Internet. Most cities have a variety of local Internet providers providing access at a flat rate. Online services such as Compuserve, Genie and Delphi also provide Internet access.

In my opinion the best Internet provider for TI99/4a is Delphi. Compuserve does not provide WEB page access via a "text only" interface. Some local Internet providers may provide a "text only" interface so you will have to inquire about this before selecting a service. The type of "text only" interface and it's abilities varry between Internet providers as well... For access to Delphi call (voice) 1-800-695-4005 and you can receive 10 FREE hours access to try it out...

Therefore, the TI99/4a can easily have Telnet access onto the Internet as well as access to USENET groups, possibly FTP and defiantly EMAIL. Web Page access (sometimes referred to as the World Wide WEB) is very messy with the TI99/4a and is just about unusable. Many TI99/4a owners use their PC's to access the Internet and view the wide range of material available not only for the TI99/4a but just about anything else that you can think of! Thus the TI99/4a can access the internet through a "text only" interface in a very limited way.

EMAIL

Currently, one of the most popular resources 99ers use on the Internet is the TI Mailing List. Managed by Tom Wills, this list has been in operation since the Fall of 1996.

I asked Tom how the list got started.

> "How it started? Well that's easy. I was trying to keep track of the addresses of the TIers on the Internet, but it turned into a really overwhelming job. My idea with the address list was so TIers could contact each other. I dropped that idea in favor of the list server as it did all I wanted, and more, and was virtually maintenance free. For me it is worth the $5/month cost for the shear pleasure of being able to be part of having such a neat method of communication available to the TI community."
>
> "Granted members of this list can't get a list of the other members very easily, but it can be done. However, as I quickly discovered, it does not have the actual user name as part of the "who" listing. I am sending a copy of the "who" listing separately, as it is long. That way everyone can see it. FYI, there are TIers subscribed to this list from South Africa, Columbia, Chile, Germany, the Netherlands, Italy, Australia, and Canada. I think I got them all (sorry if I missed any)."

Subscribing to the mailing list is easy. All you need is a computer capable of receiving email from the Internet. While I use my Pentium PC at home and work, other members of the list chose to use their TI!

To subscribe to the TI99 email list server, do as follows:

1) Address your email request to MAJORDOMO@THERIVER.COM
2) Leave the subject blank
3) The subscribe to the server, simply put SUBSCRIBE TI99 as the email message. To unsubscribe from the server, simply put UNSUBSCRIBE TI99 as the email message.
4) Send your email message from the account that you wish the messages to be sent to, or the account to be from which you wish to unsubscribe from.

That's all there is to it. If you have any problems in either subscribing to or unsubscribing from the TI99 email list server, please send me an email to TWills@TheRiver.Com.

This particular resource is a fine forum for us 99ers. Occasionally, a new product gets announced or reviewed. Often, a user requests help and gets lots of it fast. Other people use the list simply as a means to chat about their particular systems and what they're doing with them.

NEWSGROUPS

Newsgroups are similar to bulletin boards. If your Internet Service Provider gives you access to Newsgroups, look up COMP.SYS.TI. You must make sure that this newsgroup is offered by the news server you want to connect to. If you find it, use your newsreader software to mark it as being subscribed to. Posts to the COMP.SYS.TI newsgroup have dwindled since the advent of the mailing list.

John Van Weelie sent me the following information. It seems that actual access to a news server is *no longer required!* There is a site on the web, ***Dejanews*** that offers most newsgroups. Keep in mind that some message may get purged. For complete instructions, let's turn to John.

If you have browser capabilities either through ie. Mosaic, Netscape, Internet Explorer or a text based browser i.e. Lynx you can go the Dejanews which is free and has easy to use interface which offers most all
news groups.

DejaNews - http://www.dejanews.com

There are other services which are subscriber based also which offer the complete list of newgroups and most complete base of messages because they get the news feeds from a number of sources.

My exeperience has been that some messages can be purged by sites before they have managed to get through the systems. I have found reading a newsgroup from my freenet account some times have messages which never have come to my ISP. That is why if you subscribe to a newsgroup in the binaries grouping you constantly see requests for reposts of files due to parts go missing in action.

FTP

FTP, or File Transfer Protocol, is a means by which files stored on one computer can be transferred, or downloaded, to another. If your Internet Service Provider allows FTP, you're good to go. Below is a list of some of the FTP sites that offer files for the 4A.

ftp://solutions.solon.com/pub/ti99

This site offers an enormous amount of files. Note that most TI FTP archive sites make use of Barry Boone's ARC program. You will need it to unpack these files.

```
Filename         Directory     Size Description
4thannc.txt      9640          7552  FORTH+ RELEASE ANNOUNCEMENT
4thsystm.arc     9640         62336  FORTH+ SYSTEM DISK
4th720k.hlp      9640        102528  FORTH+ 720K HELP DISK
4th360k.hlp      9640        102784  FORTH+ 360K HELP
4thadjst.arc     9640         20096  FORTH+ ADJUSTMENT FILE
9640man1.arc     9640         44160 Geneve 9640 Manual updated Pt#1
9640man2.arc     9640         48256 Geneve Manual, part#2
abs300.ark       9640         46208 Interim ABASIC v3.00 *
acat.ark         9640         15744 Audio collection cataloger
aliens.arc       9640         14976 Text mode Invaders game in TIC
boot98.arc       9640         66432 Geneve Boot Eprom Source Code
crack2.ark       9640          3200 CRC checker to verify SYSTEM/SYS file v2
crackit2.arc     9640          3200 FIXED CRC utility for MDOS 2.00+
dis1onof.arc     9640           896 Turn DSK1 subdir on/off in GPL
dm23.ark         9640         24960 Directory Manager for MDOS
dm24.ark         9640         25984 Directory Manager for MDOS v2.4.
encrypt.arc      9640           896 Encrypts MDOS programs
exec13.ark       9640         10368 MDOS program to run GPL programs.
exec211.arc      9640         10112 FIX FOR exec 2.1...
font3.arc        9640         16000 MDOS Fonts for various languages.
fract20.ark      9640         70528 Mandelbrot set generator.
ged12.ark        9640         10112 MDOS program to encode/decode ark files.
gendoc.ark       9640         71296 assorted 9640 documentation files.
genevebc.txt     9640          1920 Rave/MBP Patch
gentris.pec      9640         12160 External Protocol Specification
genwin.ark       9640         29568 9640 Windows 2.0 - main software
```

```
genwin.txt       9640          2967 9640 Windows 2.0 - file list/usage hints
genwinr.ark      9640         25600 update to genwin.ark
gfv10.ark        9640          7296 MDOS program converts DV80 <-> DF128.
gplhdonf.arc     9640           896 TURN hard drive on/off from GPL
gplinfo.txt      9640          5760 GPL Mapping Information
gplmemry.txt     9640          2688 Jeff White's Method for Memory acc.
ibmgraph.ark     9640          1408 MDOS program to redefine chars 128-255
icnedt.ark       9640         12928 9640 Windows 2.0 - icon editor
icons.ark        9640          1664 9640 Windows 2.0 - icons
iconsup1.ark     9640          3712 more icons for genwin
ipc.arc          9640         26752 InterProcessControl from Alan Beard
kscanmds.arc     9640         20608 Files for MDOS/GPL
mdm150.ark       9640         57472 Myarc Disk Manager 5 for MDOS 1.50H *
mds200rn.txt     9640         32048 MDOS 2.00 Release Notes (Unix text).
mdos200.ark      9640        131968 MDOS 2.00 (H&F) - The Final Release *
mdosutl2.arc     9640         71296 MDOS C programs
mds221.ark       9640        150400 MDOS 2.21
neurlnet.arc     9640         60800 Neural Network 92 from Barnes
nwloader.arc     9640          3712 Modified MyWord Loader use w/EXEC
nwsdir.arc       9640         14976 Index to 9640 News Disks
ptype1.arc       9640          5504 Types PROGRAMS from MDOS command
qde33.ark        9640         19328 latest version of QDE editor for MDOS
roff26.ark       9640          9856 MDOS/TIC version of ROFF text formatter.
texec.arc        9640          6784 Telecommunications EXEC for 9640
ticrn2.arc       9640         75392 Run-time for TIC, release 2
turbo.ark        9640          2176 program to alter MDOS cpu speed
unmirror.arc     9640          3200 Restores a MIRROR'd bitmap
utlpak.ark       9640         45184 HD and file utilities for MDOS
utlpk2.arc       9640         45184 File/HD Utilities for MDOS
video.ark        9640          2176
vidflex.arc      9640         34176 Video Flex Demo
winapi.ark       9640         27264 9640 Windows 2.0 - API software
winlib.ark       9640          8320 9640 Windows 2.0 - TIC function library
xcalc.ark        9640         23424 hexadecimal calculator for genwin
t80:config.arc   99er/comm     42624 Config programs from Term80 demo. @CONFIG
t80:docs.arc     99er/comm     38272 Documentation from Term80 demo. @DOCS
t80:mainprg.arc  99er/comm     53888 Main program from Term80 demo. @MAINPRG
t80:note         99er/comm       485 Note from Jeff Brown. ***NOTE***
t80:readme       99er/comm      2626 Readme for Term80. *README*
t80:utils.arc    99er/comm     21376 Utilities for Term80 demo. @UTILS
tel23a.ark       99er/comm     58752 Telco terminal program v2.3, part 1.
tel23b.ark       99er/comm     38272 Telco terminal program v2.3, part 2.
term80v3d.arc    99er/comm    203904 Term 80 vt100/ansi emulator.  Demo version.
c99lbs.ark       99er/dev      94080 source files for c99/GPL libraries v4.0.
c99r4.ark        99er/dev      60288 c99 small c complier.
c99src.ark       99er/dev      25984 source files for c99/GPL compiler v4.0.
ragasm71.arc     99er/dev      46464 RAG assembler, V7, part 1.
ragasm72.arc     99er/dev      28544 RAG assembler, V7, part 2.
ragasm73.arc     99er/dev      38272 RAG assembler, V7, part 3.
fweb501a.arc     99er/edit     65408 Funnelweb V5.01 40 column.
fweb501b.arc     99er/edit     46976 Funnelweb V5.01 40 column documentation.
alienrn.arc      99er/game      6272 Game little like TI-Invaders.
arthropd.arc     99er/game      7552 Centipede look-alike.
atkcreep.arc     99er/game     44928 Attack the creepers.
elfg.tie         99er/game     41922 games and drawing program: TI-Encoded
espial.arc       99er/game     10368 Another shoot-em-up game.
arc303g          99er/util     10637 Program file containing archiver.
arc3.doc         99er/util      8320 arc3_doc in unix text format
pfc.ark          99er/util     12928 Creates self-uncompressing pgm files.
speec12e.xmo     99er/util     24448 SPEECODER V1.2E - speech programming util.
tied12.ark       99er/util     14720 GPL program to encode/decode ark files.
tied12.uu        99er/util     20311 UUencoded copy of TIED.
tifv10.ark       99er/util     12160 GPL converter, DV80 <-> DF128.
tiuued.ark       99er/util     26752 Archived UUencoded copy if TIED.
vram196k.arc     99er/util      6784 Video RAM upgrade / test program.
halfbmap.arc     99er           9088
lucxb87a.arc     99er          34688
lucxb87b.arc     99er          29312
lucxb88a.arc     99er          47488
lucxb88b.arc     99er          49792
lucxb89a.arc     99er          41088
lucxb89b.arc     99er          48256
lucxb90a.arc     99er          50560
lucxb90b.arc     99er          36224
lucxb91a.arc     99er          45184
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lucxb91b.arc     99er         40320
lucxb92a.arc     99er         45184
lucxb92b.arc     99er         39296
lucxb93a.arc     99er         39040
lucxb93b.arc     99er         30336
lucxbcol.txt     99er          5760
massxfr7.arc     99er         19072
msug.arc         99er        104064
player.arc       99er         23168
ppfcp.arc        99er         10112
ppfcp2.arc       99er         17024
ppfnted.arc      99er         12416
refmtr.arc       99er         40320
scuzzy.arc       99er         20352
tc1.arc          99er         61568
tc2.arc          99er         56448
tc3.arc          99er         57984
tc4.arc          99er         61056
tcgospel.arc     99er         44160
tcx1.arc         99er         54144
tcx2.arc         99er         54912
tcx3.arc         99er         56192
tcx4.arc         99er         48512
tcx5.arc         99er         53120
tcx6.arc         99er         45184
timeout.arc      99er         12672
tips2pp.arc      99er         22144
titechmn.arc     99er         90496
tixbroms.arc     99er        173952
tpastf.arc       99er         45696
words.arc        99er         16256
xbrom110.arc     99er        172672
TI4Amiga.lha     emu/amiga    30176 TI-99/4a emulator.  V0.1 (alpha).
600v9t9.bug      emu/dos-win    841 Bug list for v9t9 version 6.00
600v9t9.txt      emu/dos-win   1339 TI-99/4a emulator data
600v9t9.zip      emu/dos-win 929990 v9t9 version 6.00 TI-99/4a emulator
600vdems.txt     emu/dos-win  39936 v9t9 demo data
600vdems.zip     emu/dos-win 691580 v9t9 demo
convert.zip      emu/dos-win  39936 convert native TI disks for emulator
unzip.exe        emu/dos-win  30581 MSDOS program to unpack *.zip files
v9t9src.txt      emu/dos-win   1525 TI-99/4a emulator source
v9t9src.zip      emu/dos-win 714893 TI-99/4a emulator source
```

ftp://ftp.premierweb.com/pub/systems/ti99/uploads/

This site doesn't have nearly as many files as the previous one. However, there are many good screen shots, all of games, in .GIF format available for you to view or download.

ftp://ftp.io.org/pub/users/opanit/

This is the software repository of the 9T9 user group. There are many interesting items here, including their newsletter on disk and some files for your PC or Geneve.

ftp://ftp.clark.net/systems/ti99

When I last visited this site, it was still open. However, there were no files available to download.

If you are transferring these files to a PC, you need to get the right software to transfer them from the PC to your TI.

Worldwide Web

There are several sites on the web that offer information about the 4A. Even Texas Instruments has a page devoted to its orphan!

A good place to start is the "TI-99/4A Home Computer Page." This page, maintained by Richard Polivka, contains a wealth of information, video clips of TI software in action, and many links to other sites. You can find it at **http://w3.gwis.com/~polivka/994apg.html.** I asked him why he started this page.

> "When I started the page, it was just for nostalgia. I had started searching the web for 'TI-99/4A' and didn't find much. As a matter of fact, I think all I could find was 'The TI and Parallelcomputing Page'…You might want to contact him – I'm pretty sure that he was the first 4A page…I didn't know that the newsgroup existed and was thrilled to find that there were still 99/4A enthusiasts out there. I started the page because I missed the good old days of programming on my 4A, and also because I wanted to try to archive as much 4A information as possible for all of the current and former 4A users. Things have slowed down a bit now, but the majority of the e-mail that I got wasn't from those who still used their TI. It was from people who told me that they had used their 4A when they were in their teens, and credited it to getting them into their current field of electronics or computers."
>
> "I…usually get anywhere from 1000 to 2000 hits per month but past that I don't keep too much track….I'm always one of the top 10 most requested directories out of those hosted by my ISP."

This site includes several links to other sites. Some of the other sites listed below came from the list on Richard's TI page.

http://www.ultranet.com/~mike-tom/ti.shtml
This is a decent page with some interesting content. Of particular interest is the Extended BASIC program of the month. Worth visiting if only to look at what program will be featured next!

http://www.concentric.net/~Alxevans/ti99_4a.html
This page features the 9900 MICROPROCESSOR Instruction Set Summary.

http://www.ecn.ou.edu/~peberrym/ti99/ti99.html
This site has some large pictures, including the Title Screen, a nice picture of some cartridge manuals, but not much else. However, the owner of this page promises more soon!

http://www.ti.com/calc/docs/994a.htm
Yes, you read that address correctly. This is TI's own page devoted to their orphan, the 4A. It includes technical support and repair information. There is also a list of vendors and a "true stories" section, where owners of the 4A detail their experiences with technology. It's altogether a great site to visit (even if you hate TI).

http://www.enter.net/~bsnyder
This page by Brad Snyder features software to download and the TI Chat Page. The Chat Page is a live-chat room, along the same lines as IRC or other online chat rooms.

http://www.geocities.com/Athens/7374/ti.html
The TI-99/4A Shrine is an excellent page to visit. There are links to several other pages, descriptions and instructions on the use of tons of software and hardware items, a list of upcoming events, an "Emulators" section, pictures, and even sounds such as the Parsec "Press Fire to Begin." An excellent assortment, well put together in a nice-looking format.

http://www.ftech.net/~kevan/collection/manufacturer-ti.html#TI-99/4A
Addatex Software features programs written by Malcolm Adams. There are complete descriptions and screen shots of the software.

http://people.delphi.com/eicher/
This page has very little information regarding the 4A. It does, however, have one very interesting picture. There is a 4A console in the black and silver style. However, the only thing black on the console is they keyboard! Everything else is silver. Wow!

http://www.uni-frankfurt.de/~zapf/tigene.html
Don Eicher's page features information on the CC40. It's basically a page of links with some interesting archives to download and a nice table of vendor names and phone numbers.

http://www.sonyx.com/wht/

This site has some interesting software and documents to download. There is also a page devoted to the upcoming projects of Michael Zapf, which includes an implementation of TCP/IP on the 4A and Geneve.

http://www.zdnet.com/cshopper/filters/9609/punwha.html
Even publishing giant Ziff Davis gets into the 99er act! This page contains the article, "Whatever Happened to the TI 9900 CPU?" that appeared in an issue of Computer Shopper.

http://www.datalynxil.com/orgs/99ers.htm
This little page currently lists the contact info and meeting times/places for the Decatur 99er Home computer user group. They may add more content later.

http://www.mgl.ca/~jvweelie/index.htm
This is another "page of links" but contains many interesting tidbits of information.

http://www.startext.net/homes/calthar/columns/sn0996_1.htm
This is something I *love* to see. This website is a web version of the Dallas 99er user group. Their entire newsletter is posted every time a new edition comes out. Fabulous!

http://www.dcs.ed.ac.uk/~axc/MACHINE-ROOM/
The Machine Room is a site devoted to old computers. It includes many I haven't heard of. It also includes information on the 99/2, 99/4, 99/4A, and 99/8. The pages include history, detailed specifications, and photos. A great site that lets us see how our line of products stacks up against other computers from this period.

http://www.netten.net/~garycox
This page has a wealth of information on a variety of topics. Definitely worth reading for the multitude of interesting articles. Includes info on repairing the 4A as well as BBS and User Group listings.

http://www.umr.edu/~khigh01/994a.html
Right now, this page only lists a few sites. More is promised, so check this site for details and new info.

http://sys00.ti6.tu-harburg.de/~ti6hk/hobby/
The TI and Parallel Computing Page is believed to be the first web page devoted to the 4A. There is software to download and a programming challenge.

http://www.ncsc.dni.us/fun/user/tcc/cmuseum/cmuseum.htm
This site is similar in concept to The Machine Room. It is a collection of information on older computers, and has a small section devoted to the 4A. There are some interesting photos as well as a brief history and some other historical information.

http://www.freeflight.com/fms/comp/
Another listing of old computers, this includes some limited 4A information.

http://www.cais.com/fmg/bobbitt/clb.htm
This is Chris Bobbitt's Home Page.

http://firewall.fh-rosenheim.de:8888/~aurora/ti99.html
Most of this site seems to be the same old page of links. However, there are complete specifications of the 4A…in ***German!***

http://www.io.org/~opanit/
This is the site for OPA. I could find very little TI specific information here anymore, but may be worth a visit.

NOTE: The web is volatile at best. New web pages are always going up, and old ones are always coming down. While I was compiling this list, I had several people give me their own lists of 4A web pages. Some links worked and others said they were no longer available. One of the best things I can suggest is to try the above links, then search for your own.

You can do a web search by visiting the following locations:

Yahoo at http://www.yahoo.com
Lycos at http://www.lycos.com
WebCrawler at http://www.webcrawler.com

There are several other "search engines" online for you to try. You can enter any or all of the following keywords to try to locate information on our little 4A: TI-99/4A, TI, 4A, Texas, Instruments, Home, Computer, Computers, Old, Flea Market, TI99, Classic. Different combinations of some of these will produce different results.

The TI FAQ

A FAQ, or Frequently Asked Questions list, is available on the Internet. It gives a good deal of information. Below is a reprint of what I think is the most recent edition.

FAQ for TI-99/4A Newsgroup

Compiled by Jim Reiss

Compiled by Jim Reiss (jimr@indra.com), last update March 26, 1996
The following is a set of answers to some frequently asked questions on the comp.sys.ti newsgroup. There is no guarantee that any of these answers are currently valid, or even helpful. If you find an error or omission in this FAQ, please let me know. Thank you to all those who have suggested changes and additions. NOTE: If you want something added to the FAQ, please send the answer as well as the question. I don't know everything.

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2) Where can I find TI-8x calculator software?
3) How can I make a cable to connect my TI-8x to a PC?
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5) What are some TI 99/4A FTP sites?
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16) Where can I get new TIGA drivers for my PC?

Answers

1) What is the focus of this newsgroup?
The comp.sys.ti newsgroup is for discussion of computers made by Texas Instruments. The bulk of the discussion tends to revolve around the TI 99/4A, a remarkable home computer which was discontinued in 1983 due to the cutthroat nature of the home computer market at that time.

2) Where can I find TI-8x calculator software?
There is an anonymous FTP site at archive.ppp.ti.com which maintains a collection of software for TI's graphing calculators in the /pub/graph-ti directory. It has been reported that ftp.internic.net also has these files. The bit.listserv.graph-ti and bit.listserv.calc-ti newsgroups contain useful files as well.

3) How can I make a cable to connect my TI-8x to a PC?
I have been told that there are schematics available on the World Wide Web at "http://www.algonet.se/~mha/ti.html". If you decide you would like to buy one, it is apparently carried by Educalc (800-633-2252) and Advantage Marketing (800-937-9777), as well as some other dealers whose names you can get by calling 800-TI-CARES. The prices from dealers are supposed to be better than buying direct from TI.

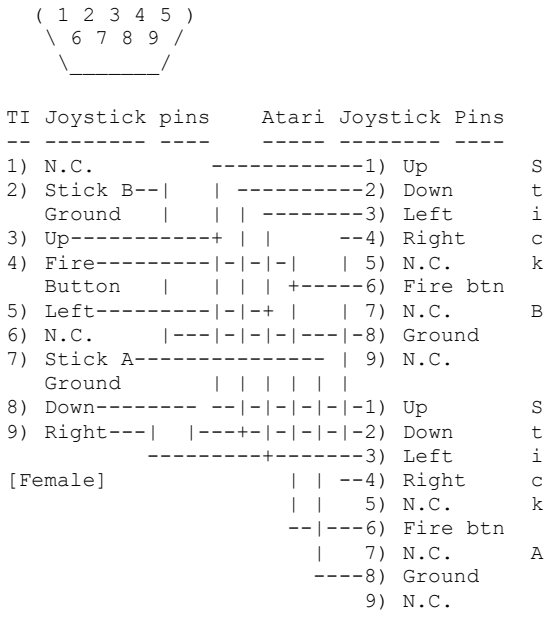
4) What is the Myarc 9640/Geneve?
A few years after TI dropped the 99/4A, a third party supplier of 99/4A peripherals (Myarc) completed a design for a replacement computer which had many enhancements over the 99/4A. This machine was originally to be called the "Myarc 9640 Family Computer", but Myarc suddenly decided to use the name "Geneve" which is not universally liked. The computer is a card for the 99/4A Peripheral Expansion Box which replaces the interface card used to connect to a 99/4A console. In its standard configuration, the 9640 is 3-5 times the speed of a 99/4A and comes with 512K of CPU RAM, 128K of video RAM, a battery-backed clock chip, joystick and mouse ports, and an IBM PC/XT keyboard. The video processor provides significantly better graphics, as well as 80 column text display, with an analog RGB (not VGA) monitor. The native operating system is an MS-DOS clone called MDOS, and 99/4A software is run with an emulation utility called the "GPL Environment". In either MDOS or GPL, some of the system RAM can be used for print spooling and/or a RAMdisk.

5) What are some TI 99/4A FTP sites?
There aren't many. One is at solutions.solon.com (the /pub/ti99 directory). Another is at ftp.io.org (the /pub/users/opanit directory). Browse each, it's likely that one will have some things the other doesn't.

6) How can I expand my TI 99/4A?
In all sorts of ways. The 99/4A console is fairly limited in what it can do, but with a Peripheral Expansion Box (PE Box or PEB for short), you can easily add a serial/parallel interface, a floppy disk controller, and 32K of memory expansion. This is probably the minimum you want if you plan on making serious use of your 99/4A. You can also add an MFM or SCSI hard disk, a RAMdisk card, a clock card, an 80 column/advanced graphics card, an IBM PC keyboard, a GRAM device (allows loading of cartridges from disk), and the list goes on and on. There are many options for those who want to push their 99/4As to the limit.

7) What is Funnelweb?
Funnelweb is a descendant of the TI-Writer word processor, but has gone far beyond it. Funnelweb provides a menu-driven environment into which you can integrate all sorts of software. Among the many features of the environment is the ability to catalog a disk without loading a disk manager, the ability to run all sorts of machine language programs with the Extended BASIC cartridge plugged in, and bundled utilities like a disk editor and a disk manager. There are word processing and programming versions of the editor portion, and there is support for 80 column cards. There's far more to say about Funnelweb than is appropriate for a FAQ, but hopefully this will be enough of an overview to give some idea.

8) How can I connect Atari joysticks to the TI 99/4A?
Editor's note: this information was provided by Sam Carey.



Bob Sutton adds that another option is to find a pair of non-working TI joysticks and add 9-pin connectors to that cable. Which colors go to which pins is unknown, but the diagram above and a decent ohmmeter should be enough to figure it out. Bob adds that he made his by trial and error.

9) How can I transfer files between the TI 99/4A and a PC?
There are basically two options: PC-Transfer or a serial cable. In either case, only text files are typically good candidates to move. Picture files also can be useful when moved from one system to the other.
PC-Transfer is a program which requires a Myarc or CorComp floppy disk controller. It allows reading and writing of floppy disks in the MS-DOS 360K disk format.
Using a serial cable, you simply use a terminal emulation program on each end, doing an XMODEM (or other supported protocol) transfer.

10) Is there a TI 99/4A magazine?
Yes, MICROpendium has been around for over ten years now, and is still in print. Their address is:
Micropendium
PO Box 1343
Round Rock TX 78680

A 6 issue (one year) subscription is $35 for domestic (U.S.) subscribers.
The rate for new subscribers is $25 for the first year.

11) Are there TI-99/4A emulators for other computers?
At the time of this writing, are at least two emulators available for MS-DOS PCs. There has been some work on TI emulators for other computers, but no details are available as to the status of those projects.
One of the two DOS products is PC99 from CaDD Electronics. It is a
commercial software package which was designed emulate the TI 99/4A as fully
as possible. Information is available by e-mail from mjmw@xyvision.com, or
by U.S. mail by writing to:
CaDD Electronics
45 Centerville Drive
Salem, NH 03079-2674

The other is called “V9t9”, and is shareware. It was written by a student named Edward Swartz. Due to legal hassles from TI, this emulator was pulled off the market for a while, but a new version is now available on various FTP sites, including:
ftp.io.com:/pub/usr/edswartz/v9t9
ftp.uni-erlangen.de:/pub/pc/msdos/emulator/ti994a
ftp.wustl.edu:/pub/msdos_uploads/emulators/ti994a
solutions.solon.com:/pub/ti99/dos-windows
The v9t9 author’s e-mail address is swartze@ralph.txswu.edu.

12) What are the pinouts of the 99/4A connectors?
This information is too lengthy to include in a FAQ, but Thierry Nouspikel (nouspike@cmu.unige.ch) has a text file with this sort of information and has volunteered to send it to interested parties.

13) How about adding this to the FAQ?
If you think something should be in the FAQ, feel free to let me know. Please note, however, that this FAQ is intended to provide helpful pointers, not detailed information. Listing all of the TI user groups would be an example of something that would be far too big to include in a FAQ.

14) What is the SuperAMS, and how do I get my hands on one?

SuperAMS is an expanded memory system for the TI 99/4A ONLY. It does not work with the Myarc computer or the old 99/4. The SuperAMS replaces the 32K card, and uses 4K banks of RAM in that memory space. The SuperAMS card works very differently than a RAMdisk card, it is designed to work as a pure memory expansion card rather than as a device for storing files. A macro assembler and a version of the small c compiler “c99” can be used to write programs which use this memory. The card is being sold by the SW99ers User Group in Tucson, Arizona. For more information, send e-mail to David Ormand (dlormand@ccgate.hac.com) or Mike Doane (mdoane@pproject.com). Technical information is available from the designer, Jim Krych (ab453@cleveland.freenet.edu). If none of these e-mail addresses work, contact Tom Wills

(twills@TheRiver.com). You can also contact the group in the evening via phone (Jack or BJ Mathis - 520-474-5046, Mike Doane - 520-298-3835) or via U.S. Mail at:
Southwest Ninety Niners User Group
P.O. Box 17831
Tucson, AZ 85731-7831
Attn: AMS Card

15) Can I use a TI 486 chip to upgrade my 386 computer?

Probably, though it would be very difficult if your 386 chip is soldered directly to your motherboard. Assuming the 386 chip is in a socket, there are a number of 486 upgrade packages available. Consult your favorite PC upgrade vendor for more information.

16) Where can I get new TIGA drivers for my PC?

TIGA graphics adapters never really caught on, and so any companies once involved in supporting such cards have almost certainly ceased development of new and updated drivers. You're probably out of luck in this area.

Appendix A

The following document was suggested to me by several members of the TI Mailing List. I've included it here for you to read. It describes how to access many Internet services ***using only email!***

```
+-------------------------------------------------+
|        Accessing The Internet By E-Mail         |
|  Doctor Bob's Guide to Offline Internet Access  |
|              6th Edition - March 1997           |
+-------------------------------------------------+
```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How to Access Internet Services by E-mail

If you don't have direct access to the Internet through your BBS or online service, you're not alone. Many of the world's countries with Internet connections have only e-mail access to this world-wide network of networks. But if you think that sounds limiting, read on. You can access almost any Internet resource using e-mail. Maybe you've heard of FTP, Gopher, Archie, Veronica, Finger, Usenet, Whois, Netfind, WAIS, and the World-Wide Web but thought they were out of your reach because you don't have a direct connection.

Not so! You can use simple e-mail commands to do all of this and much more on the Internet. And even if you do have full Internet access, using e-mail services can save you time and money. If you can send a note to an Internet address, you're in the game. I encourage you to read this entire document first and then go back and try out the techniques that are covered. This way, you will gain a broader perspective of the information resources that are available, an introduction to the tools you can work with, and the best methods for finding the information you want.

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Recent Changes To This Document

6.5 Forms support for webmail; New info on Usenet by e-mail; Binky is dead;
6.4 Jive Server gone; Infomart autoresponder replaced by Binky; added info on Usenet via webmail
6.3 Verified all ftp/archie/gopher/web mail servers, many are defunct; added Jive server, some new Agora servers, new translation info.
6.2 Infobot is defunct (sniff)
6.1 New/defunct FTP, WWW, gopher mail servers; Anon.penet.fi is gone; New anon mailers; dns@grasp.insa-lyon.fr is gone; Vigilante Filter; Mercury Mail;
6.0 New LISZT list/newsgroup searcher; new archiemail, ftpmail, gophermail and webmail servers; INETMAIL utility; minor editing; Updated info on Usenet and WAIS by e-mail; Sunsite, DEC, & Oakland FTP-mailers axed; Reference.Com replaces Stanford usenet filter; new translations

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Site: ftp.mailbase.ac.uk
get pub/lists/lis-iis/files/e-access-inet.txt

Or on the Web in HTML format at:
http://www.activesol.com/www/dbobfram.htm

Before You Write...

Please make sure you have the latest version of this guide before writing to the author with questions and updates. Don't give up too quickly on the busy e-mail servers, and if you get an error message, try your operation again on a different day or time. If you'd like to keep up with the latest updates and announcements of new versions, send the command:
SUBSCRIBE ACCMAIL Firstname Lastname in the BODY of a message to the address LISTSERV@LISTSERV.AOL.COM". In fact, the ACCMAIL list is a great place to ask any questions you have about this guide. You're likely to get a quicker response from one of the list subscribers, because the author gets several hundred messages per week!

Other Translations of This Document

Several readers have graciously volunteered to translate this text into languages other than English. Please contact the author if you would like to assist in the translation of this document into another language. The list below shows the status of the translation work that has been done or is in progress. To obtain any of the completed texts, send e-mail with
Subject:send accmail.xx (where "xx" is as shown below)
To: BobRankin@MHV.NET

Translation	Filename	Translation	Filename
Catalan (5th Ed.)	accmail.ca	Chinese GB (6th Ed.)	accmail.cn
Chinese BIG5 (5th Ed.)	accmail.tw	Croatian (4th Ed.)	accmail.hr

Czech (6th Ed.)	accmail.cz	Danish (5th Ed.)	accmail.dk
Dutch (3rd Ed.)	accmail.nl	Esperanto (4th Ed.)	accmail.eo
Farsi (5th Ed.)	accmail.ir	Finnish (6th Ed.)	accmail.fi
French (6th Ed.)	accmail.fr	German (5th Ed.)	accmail.de
Greek (In progress)	accmail.gr	Hebrew (5th Ed.)	accmail.he
Hungarian (4th Ed.)	accmail.hu	Irish (In progress)	accmail.ie
Indonesian (4th Ed.)	accmail.id	Italian (5th Ed.)	accmail.it
Lithuanian (6th Ed.)	accmail.lt	Japanese (6th Ed.)	accmail.jp
Norwegian (4th Ed.)	accmail.no	Polish (4th Ed.)	accmail.pl
Portuguese (6th Ed.)	accmail.pt	Romanian (6th Ed.)	accmail.ro
Russian (5th Ed.)	accmail.su	Serbian (6th Ed.)	accmail.sr
Slovak (5th Ed.)	accmail.sk	Spanish (6th Ed.)	accmail.sp
Tagalog (In progress)	accmail.ph	Thai (6th Ed.)	accmail.th
Turkish (In progress)	accmail.tr	Somali (5th Ed.)	accmail.so
Ukranian (6th Ed.)	accmail.ua		

NOTE: Your "send accmail.xx" request MUST be in the SUBJECT line!

Acknowledgements

This document is continually expanding and improving as a result of the daily flood of comments and questions received by the author. The following individuals are hereby recognized for their work in translating "Accessing" to various languages. (If I forgot anyone, let me know and I'll gladly add you to the list.)

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A Short Aside... "What is the Internet?"

Many introductory texts on the Internet go into excruciating detail on the history, composition and protocol of the Internet. If you were looking for that you won't find it here, because this is a "how to" lesson, not a history book. When you buy a new car, they don't make you read "The Life and Times of Henry Ford" before you can turn the top down and squeal off the lot. And when you get a new computer, nobody forces you to read a text on logic design before you fire up Leisure Suit Larry or WordPerfect.

So if you're the type that wants to short-circuit the preliminaries and just dig in, you've come to the right place. I'm not going to bore you with the gory details. Instead, I'll just offer up my Reader's Digest condensed definition of the Internet, and encourage you to find out more as you gain skill at using the tools described herein.

Internet (noun) - A sprawling collection of computer networks that spans the globe, connecting government, military, educational and commercial institutions, as well as private citizens to a wide range of computer services, resources, and information. A set of network conventions and common tools are employed to give the appearance of a single large network, even though the computers that are linked together use many different hardware and software platforms.

The Rules of The Game

This document is meant to be both tutorial and practical, so there are lots of actual commands and internet addresses listed herein. You'll notice that when these are included in the text they are indented by several spaces for clarity. Don't include the leading spaces when you try these commands on your own!

You'll also see things like "<file>" or "<name>" appearing in this document. Think of these as place holders or variables which must be replaced with an appropriate value. Do NOT include the quotes or brackets in your value unless specifically directed to do so.

Most e-mail servers understand only a small set of commands and are not very forgiving if you deviate from what they expect. So include ONLY the specified commands in the Subject or body of your note, leaving off any extraneous lines such as your signature, etc.

Unless otherwise specified, you can leave the Subject and/or body of the note empty. If your mail software insists on a Subject or body, just type "XYZZY" or something equally non-sensical.
You should also ensure that you have one blank line between the note headers and the body of your note. And do pay attention to upper/lower case in directory and file names when using e-mail servers. It's almost always important.

SPECIAL NOTE: The e-mail servers listed in this guide are for the most part operated by kind-hearted volunteers at companies or universities. If you abuse (or over-use) the servers, there's a very good chance they will be shut down permanently. This actually happened to several of the e-mail servers in 1995 and 1996. If you have more direct Internet access, let others who are less fortunate use the e-mail servers. Try to limit your data transfers to one megabyte per day. Don't swamp the servers with many requests at a time.

FTP BY E-MAIL

FTP stands for "file transfer protocol", and is a means of accessing files that are stored on remote computer systems (sites). Files at FTP sites are typically stored in a tree-like set of directories (or nested folders for Mac fans), each of which pertains to a different subject.

When visiting an FTP site using a "live" internet connection, one would specify the name of the site, login with a userid & password, navigate to the desired directory and select one or more files to be transferred back to their local system. Using FTP by e-mail is very similar, except that the desired site is reached through a special "ftpmail server" which logs in to the remote site and returns the requested files to you in response to a set of commands in an e-mail message.

Using FTP by e-mail can be nice even for those with full Internet access, because some popular FTP sites are heavily loaded and interactive response can be very sluggish. So it makes sense not to waste time and connect charges in these cases.

To use FTP by e-mail, you first need a list of FTP "sites" which are the addresses of the remote computer systems that allow you to retrieve files anonymously (without having a userid and password on that system).
There are some popular sites listed later in this guide, but you can get a comprehensive list of hundreds of anonymous FTP sites by sending an e-mail message to the internet address: mail-server@rtfm.mit.edu and include these lines in the BODY of the note.

send usenet/news.answers/ftp-list/sitelist/part1
... (19 lines omitted for brevity) ...
send usenet/news.answers/ftp-list/sitelist/part21

You will then receive (by e-mail) 21 files which comprise the "FTP Site List". Note that these files are each about 60K, so the whole lot will total over a megabyte! This could place a strain on your system, so first check around to see if the list is already available locally. Another file you might want to get is "FTP Frequently Asked Questions" which contains lots more info on using FTP services, so add this line to your note as well:

send usenet/news.answers/ftp-list/faq

After you receive the site list you'll see dozens of entries like this, which tell you the site name, location and the kind of files that are stored there.
Site : oak.oakland.edu Country: USA Organ : Oakland University, Rochester, Michigan System : Unix
Comment: Simtel Software Repository mirror Files : BBS lists; ham radio; TCP/IP; Mac; modem protocol info; MS-DOS; MS-Windows; PC Blue; PostScript; Simtel-20; Unix
If you find an interesting FTP site in the list, send e-mail to one of these ftpmail servers:

```
ftpmail@sunsite.auc.dk          (Denmark)
ftpmail@garbo.uwasa.fi          (Finland)
bitftp@vm.gmd.de                (Germany)
ftpmail@ftp.uni-stuttgart.de    (Germany)
ftpmail@ieunet.ie               (Ireland)
```

```
   ftpxcorreo@ftp.rcp.net.pe      (Peru)
   bitftp@plearn.edu.pl           (Poland)
   ftpmail@relay.interbit.ro      (Romania)
   ftpmail@ftp.sunet.se           (Sweden)
   ftpmail@ftp.luth.se            (Sweden)
   bitftp@pucc.princeton.edu      (United States)
   ftpmail@src.doc.ic.ac.uk       (United Kingdom)
   ftpmail@conicit.ve             (Venezuela)
   ftpmail@inf.tu-dresden.de      (Germany * Local files only *)
   ftp-request@netcom.com         (USA     * Local files only *)
   ftpmail@oak.oakland.edu        (USA     * Local files only *)
   ftpmail@NCTUCCCA.edu.tw        (Taiwan  * Local files only *)
   ftpmail@ftpmail.ramona.vix.com (* DEFUNCT *)
   ftpmail@census.gov             (* DEFUNCT *)
   ftpmail@archie.inesc.pt        (* DEFUNCT *)
   ftpmail@cs.uow.edu.au          (* DEFUNCT *)
   ftpmail@decwrl.dec.com         (* DEFUNCT *)
   ftpmail@sunsite.unc.edu        (* DEFUNCT *)
   ftpmail@ftp.sun.ac.za          (* DEFUNCT *)
   ftpmail@ftp.rz.uni-dresden.de  (* DEFUNCT *)
```

It doesn't really matter which one you choose, but a server that is geographically close may respond quicker. (Please DON'T use the first one in the list just because it's there!) In the body of the note, include these lines:
open <site> * use "connect <site>" for dec.com sites
dir
quit

This will return to you a list of the files stored in the root directory at that site. See the figure below for an example of the output when using "oak.oakland.edu" for the site name.

```
 +-------------------------------------------------------------------------+
r--r--r--   1 w8sdz    OAK         1255 Nov  9 16:32 README
    drwxr-xr-x   3 w8sdz    OAK         8192 Feb 25 05:17 SimTel
    d--x--x--x   3 root     system      8192 Jan 19 20:26 bin
    d--x--x--x   5 root     system      8192 Dec 30 05:15 etc
    drwxr-xr-x   3 w8sdz    OAK         8192 Jan 30 17:37 pub
 +-------------------------------------------------------------------------+
```

In your next e-mail message you can navigate to other directories by inserting (for example)
chdir pub (use "cd" if "chdir" doesn't work)
before the "dir" command. (The "chdir" means "change directory" and "pub" is a common directory name, usually a good place to start.) Once you determine the name of a file you want to retrieve, use: get <name of file> in the following note instead of the "dir" command. If the file you want to retrieve is plain text, this will suffice. If it's a binary file (an executable program, compressed file, etc.) you'll need to insert the command: "binary" in your note before the "get" command.

Tip: Many directories at FTP sites contain a file called 00-index.txt, README, or something similarly named which gives a description of the files found there. If you're just exploring and your "dir" reveals one of these filenames, do a "get" on the file and save yourself some time.

OK, let's grab the text of The Magna Carta. Here's the message you send to ftpmail@src.doc.ic.ac.uk (or another ftpmail server):

```
   open ftp.spies.com               (The name of the FTP site)
   chdir Gov/World                  (The directory where the file lives)
   get magna.txt                    (Sign here please, John)
   quit                             (Bring it on home)
```

Here are the commands you would send to to get a file from the Simtel Software Repository that was mentioned earlier.
open oak.oakland.edu

```
chdir SimTel/msdos/disasm
binary                          (Because we're getting a ZIP file)
get bubble.zip
quit
```

Some other interesting FTP sites you may want to "visit" are listed below. (Use these site names on the "open" command and the suggested directory name on your "chdir" command, as in the previous examples.)

```
   ocf.berkeley.edu    Try: pub/Library for documents, Bible, lyrics, etc.
```

```
rtfm.mit.edu        Try: pub/usenet/news.answers for USENET info
oak.oakland.edu     Try: SimTel/msdos for a huge DOS software library
gatekeeper.dec.com  Try: pub/recipes for a cooking & recipe archive
```

Remember that you can't just send e-mail to ftpmail@<anysite>, rather you send the "open <site>" command to one of the known ftpmail servers.

Notes:
The ftpmail servers tend to be quite busy. Your reply may not arrive for several minutes, hours, or days.
Some large files may be split into smaller pieces and returned to you as multiple messages. You can control this (and also override the return e-mail address) using special ftpmail commands. The commands are not the same on every server - send the "help" command to find out how FTPMAIL works on the server you are using! Often the ftpmail servers keep local archives. Open the local archives by not specifying a site on the "open" line. Using the local archives gives your request priority so it will be processed before all outside requests.

If the file that is returned to you ends up looking something like what you see below, (the word "begin" with a number and the filename on one line, followed by a bunch of 61-character lines) it most likely is a binary file that has been "uuencoded" by the sender. (This is required in order to reliably transmit binary files by e-mail.)

```
begin 666 answer2.zip
M4$L#!'H'!@'.'/6H?18.$-Z$F@P""@?"",""""5$5,25@S,34N5%A480I[ M!P8;!KL,2P,)!PL).PD'%@.(!@4.!P8%-
@.6%PL*!@@*.P4.%00.%P4*.'4.
```

You'll need to scrounge up a version of the "uudecode" program for your operating system (DOS, OS/2, Unix, Mac, etc.) in order to reconstruct the file. Most likely you'll find a copy already at your site or in your service provider's download library, but if not you can use the instructions in the next section to find out how to search FTP sites for a copy.

ARCHIE BY E-MAIL

Let's say you know the name of a file, but you have no idea at which FTP site it might be lurking. Or maybe you're curious to know if files matching a certain naming criteria are available via FTP. Archie is the tool you can use to find out. Archie servers can be thought of as a database of all the anonymous FTP sites in the world, allowing you to find the site and/or name of a file to be retrieved. And using Archie by e-mail can be convenient because some Archie searches take a LONG time to complete, leaving you to tap your toes in the meantime. To use Archie by e-mail, simply send an e-mail message to one of the following addresses:

```
archie@archie.funet.fi             (Finland)
archie@archie.kuis.kyoto-u.ac.jp   (Japan)
archie@archie.luth.se              (Sweden)
archie@archie.doc.ic.ac.uk         (United Kingdom)
archie@archie.rutgers.edu          (United States)
archie@archie.unl.edu              (United States)
archie@archie.sura.net             (United States - defunct?)
archie@archie.au                   (Australia - defunct?)
archie@archie.th-darmstadt.de      (Germany - defunct?)
```

To obtain detailed help for using Archie by mail, put the word "help" in the subject of the note and just send it off. You'll receive e-mail explaining how to use archie services. If you're the "just do it" type, then enter the command: "find <file>" where "<file>" is the name of the file to search for, in the BODY (not the subject) of the note. This will search for files that match your criteria exactly. If you want to find files that contain your search criteria anywhere in their name, insert the line set search sub before the "find" command. Some other useful archie commands you might want to use are:

```
set maxhits 20             (limit output, default is 100 files)
set match_domain usa       (restrict output to FTP sites in USA)
set output_format terse    (return output in condensed form)
```

When you get the results from your Archie query, it will contain the names of various sites at which the desired file is located. Use one of these site names and the directory/filename listed for your next FTP file retrieval request. Now you've learned enough to locate that UUDECODE utility mentioned in the last section. Let's send e-mail to archie@archie.rutgers.edu (or one of the other archie servers), and include the following lines in the message:

```
set match_domain usa
set search sub             (looking for a substring match...)
find uudecode              (must contain this string...)
```

Note: You'll be looking for the uudecode source code, not the executable version, which would of course be a binary file and would arrive uuencoded - a Catch 22! The output of your archie query will contain lots of information like this:

```
Host ftp.clarkson.edu    (128.153.4.2)
Last updated 06:31  9 Oct 1994

Location: /pub/simtel20-cdrom/msdos/starter
FILE    -r-xr-xr-x    5572 bytes  21:00 11 Mar 1991  uudecode.bas
Location: /pub/simtel20-cdrom/msdos/starter
FILE    -r-xr-xr-x    5349 bytes  20:00 17 Apr 1991  uudecode.c
```

Now you can use an ftpmail server to request "uudecode.bas" (if you have BASIC available) or "uudecode.c" (if you have a C compiler) from the ftp.clarkson.edu site. It should be noted that the latest version of uudecode can be found at the SimTel repository. Send e-mail to listserv@SimTel.net, including any or all of these commands in the BODY of the note, and the requested files will be returned to you by e-mail.

```
get uudecode.bas
get uudecode.c
get uudecode.doc
```

SPECIAL NOTE: For DOS users, there is an EXECUTABLE ASCII version of the UUDECODE.COM program available. This is a rare exception to the rule that executable files must be encoded to survive e-mail transmission. You can receive it via e-mail and execute it "as is". To get a copy, send e-mail to BobRankin@MHV.net with Subject: send uudecode.com (must be lowercase). For further info on using uudecode, request the "uudecode.how" file.

GOPHER BY E-MAIL

Gopher is a tool for exploring the Internet and is one way to find a resource if you know what you want, but not where to find it. Gopher systems are menu-based, and provide a user-friendly front end to Internet resources, searches and information retrieval. When visiting a Gopher site using a "live" Internet connection, one would specify the name of the site, navigate through a series of hierarchical menus to a desired resource, and then either read or transfer the information back to their home system.

Using Gopher by e-mail is very similar, except that the desired site is reached through a special "gophermail server" which gophers to the remote site on your behalf and and returns the requested menu, submenu or file to you in response to a set of commands in an e-mail message.

NOTE: In recent years, Gopher has fallen in popularity and most of the gophermail servers have closed down. But still there is quite a bit of information available on gopher servers, and a few working gophermail servers. Although not every item on every menu will be accessible by "gophermail", you'll still find plenty of interesting things using this technique.
Down to brass tacks... let's send e-mail to one of these addresses:

```
gopher@ncc.go.jp               Japan
gophermail@eunet.cz            Czech Republic
gophermail@cr-df.rnp.br        Brazil (defunct?)
gopher@pip.shsu.edu            USA (defunct?)
gopher@info.lanic.utexas.edu   USA (defunct?)
gopher@lfmotol.cuni.cz         ( DEFUNCT )
gopher@studserv.rug.nl         ( DEFUNCT )
gopher@nig.ac.jp               ( DEFUNCT )
gopher@earn.net                ( DEFUNCT )
gophermail@calvin.edu          ( DEFUNCT )
```

You can optionally specify the address of a known gopher site on the Subject line to get the main menu for that site instead. Here are some interesting gopher sites you may like to explore at your leisure.

```
cwis.usc.edu
gopher.micro.umn.edu
english-server.hss.cmu.edu
```

Let's be bold and skip the HELP stuff for now. Fire off a note to one of the gophermail servers and specify

```
Subject:    cwis.usc.edu
```

You'll get a message back from the server that looks something like the text in the figure below.

```
 +---------------------------------------------------------------------+
Mail this file back to gopher with an X before the items you want.
1.  About USCgopher/
2.  How To Find Things on Gopher/
3.  University Information/
4.  Campus Life/
5.  Computing Information/
6.  Library and Research Information/
7.  Health Sciences/
8.  Research and Technology Centers/
9.  Other Gophers & Info Resources/
```

You may edit the following numbers to set the maximum sizes after which GopherMail should send output as multiple email messages:

```
Split=27K bytes/message <- For text, bin, HQX messages
Menu=100 items/message <- For menus and query responses
   #
Name=About USCgopher
Numb=1
Type=1
Port=70
Path=1/About_USCgopher
Host=cwis.usc.edu
# ... (some lines deleted) ...
Name=Other Gophers and Information Resources
Numb=9
Type=1
Port=70
Path=1/Other_Gophers_and_Information_Resources
Host=cwis.usc.edu
 +---------------------------------------------------------------------+
```

To proceed to a selection on the returned menu just e-mail the whole text of the note (from the menu downwards) back to the gopher server, placing an "x" next to the items(s) you want to explore. You'll then receive the next level of the gopher menu by e-mail. Some menu choices lead to other menus, some lead to text files, and some lead to searches. In the example above, let's select x 9. Other Gophers & Info Resources and mail the whole shebang right back at the gophermail server. You should then get a menu with a number of interesting selections including "Gopher Jewels". You'll find a LOT of good stuff along that path. The Gopher Jewels project is probably the best organized collection of Internet resources around. If a menu item is labelled "Search" you can select that item with an "x" and supply your search words in the Subject: of your reply. Note that your search criteria can be a single word or a boolean expression such as:

```
document and (historic or government)
```

Each of the results (the "hits") of your search will be displayed as an entry on yet another gopher menu! Note: You needn't actually return the entire gopher menu and all the routing info that follows it each time you reply to the gophermail server. If you want to minimize the size of your query, you can strip out the "menu" portion at the top and include only the portion below that pertains to the menu selection you want. Just remember that if you use this approach, you must specify "get all" on the Subject line. (Exception: for searching, specify only the search terms on the Subject line.) The example below is equivalent to selecting "option 9" as we did earlier.

```
Split=0K bytes/message
Menu=0 items/message
   #
Name=Other Gophers
Numb=9
Type=1
Port=70
Path=1/Other_Gophers_and_Information_Resources
Host=cwis.usc.edu
```

If this looks like nonsense to you, here's a human translation:
Connect to PORT 70 of the HOST (computer) at "cwis.usc.edu", retrieve the sub-menu "Other Gophers", and send it to me in ONE PIECE, regardless of its size.

Note: Sometimes gophermail requests return a blank menu or message. This is most likely because the server failed to connect to the host from which you were trying to get your information. Send your request again later and it'll probably work.

VERONICA BY E-MAIL

Speaking of searches, this is a good time to mention Veronica. Just as Archie provides a searchable index of FTP sites, Veronica provides this function for "gopherspace". Veronica will ask you what you want to look for (your search words) and then display another menu listing all the gopher menu items that match your search. In typical gopher fashion, you can then select one of these items and "go-pher it"!

To try Veronica by e-mail, retrieve the main menu from a gophermail server using the method just described. Then try the choice labelled "Other Gopher and Information Servers". This menu will have an entry for Veronica. You'll have to select one (or more) Veronica servers to handle your query, specifying the search words in the Subject of your reply. Here's another example of where using e-mail servers can save time and money. Often the Veronica servers are very busy and tell you to "try again later". So select 2 or 3 servers, and chances are one of them will be able to handle your request the first time around.

A Gophermail Shortcut: The path to some resources, files or databases can be a bit tedious, requiring several e-mail messages to the gophermail server. But here's the good news... If you've done it once, you can re-use any of the e-mail messages previously sent in, changing it to suit your current needs. As an example, here's a clipping from the Veronica menu you would get by following the previous instructions. You can send these lines to any gophermail server to run a Veronica search.

```
Split=64K bytes/message <- For text, bin, HQX messages (0 = No split)
Menu=100 items/message <- For menus and query responses (0 = No split)
   #
Name=Search GopherSpace by Title word(s) (via NYSERNet)
Type=7
Port=2347
Path=
Host=empire.nysernet.org
```

Specify the search words in the Subject line and see what turns up! You can use boolean expressions in Veronica searches. For a guide to composing Veronica searches, send these lines to a gophermail server:

```
Name=How to Compose Veronica Queries
Path=0/veronica/how-to-query-veronica
Host=veronica.scs.unr.edu
```

USENET BY E-MAIL

Usenet is a collection of over 15000 discussion groups on every topic imaginable. In order to get a proper start and avoid embarrasing yourself needlessly, you must read the Usenet new users intro document, which can be obtained by sending email to: mail-server@rtfm.mit.edu and include this line in the BODY of the note: send usenet/news.answers/news-newusers-intro

To get a listing of Usenet newsgroups, add these commands to your note:send usenet/news.answers/active-newsgroups/part1 (also get part2) send usenet/news.answers/alt-hierarchies/part1 (also get part2 & part3)

To get the FAQ (Frequently Asked Questions) file(s) for a given newsgroup, try a command like this: index usenet/<newsgroupname> (Substitute dots for dashes if they appear in the newsgroup name.) If any FAQ files are available, they will be listed in the returned info, and you can request them with a command like: send usenet/<newsgroupname>/<faqfilename>

Once you've handled the preliminaries, you'll need to know how to read and contribute to Usenet newsgroups by e-mail. To read a newsgroup, you can use the gophermail service discussed earlier in this guide. To obtain a list of recent postings to a particular newsgroup, send the following lines to one of the gophermail servers mentioned previously. Specify "Subject: get all" and include only these lines in the message body. (You must replace "<newsgroup>" below with the name of the Usenet newsgroup you wish to access. eg: alt.answers, biz.comp.services, news.newusers.questions, etc.)

```
Type=1
Port=4320
Path=nntp ls <newsgroup>
Host=services.canberra.edu.au
```

If this doesn't work, you can try another Host by substituting one of the lines below.

```
Host=gopher.ic.ac.uk
Host=risc.upol.cz
Host=gopher.tc.umn.edu (maybe, very busy)
```

Note that some of these sites carry only a limited range of newsgroups, so you may have to try several before finding one which carries the newsgroup you're looking for. When the newsgroup does not exist, gophermail sends something like "'nntp ls <newsgroup>': path does not exist". When a site does not accept outside requests, gophermail sends something like "Sorry, we don't accept requests outside campus".

If successful, the gophermail server will send you a typical gopher menu on which you may select the individual postings you wish to read. If your query returns nothing, or you get a "not found" message, try it at another time of day. The servers are very busy during regular business hours.

NOTE: Gophermail servers are a vanishing breed. You can also get Usenet postings from several webmail servers listed in the WORLD-WIDE WEB BY E-MAIL section later in this document. There are two approaches:

1) Use a webmail server to access a gopher site which carries Usenet. The example from above when translated into a web address would be:
gopher://services.canberra.edu.au:4320/1nntp

2) Look for an Agora server with a "Y" in the "Usenet Access" column and send a command like this in the message BODY:
send news:<newsgroup>

With a little luck, you'll get a list of recent postings to the newsgroup, and then you can retrieve the individual postings by replying to the message from the Agora server. Make sure not to change the subject line of the reply message, and just put the number of the posting you want in the message BODY.
If you decide to make a post of your own, mail the text of your post to:

```
group.name@myriad.alias.net
post-group.name@newspost.zippo.com
group.name@news.cs.dal.ca
group.name@news.uni-stuttgart.de
no.group.name@news.uninett.no         (Norwegian newsgroups only)
group.name@crs4gw.crs4.it             (Italy users only)
group.name-news@newsbase.cs.yale.edu  (* DEFUNCT *)
group.name@brushtail.hna.com.au       (* DEFUNCT *)
group.name@dispatch.demon.co.uk       (* DEFUNCT *)
group.name@news.demon.co.uk           (* DEFUNCT *)
```

So to post to news.newusers.questions, you might send your message to:

news.newusers.questions@myriad.alias.net -OR-
post-news.newusers.questions@newspost.zippo.com

Be sure to include an appropriate Subject: line, and include your real name and e-mail address at the close of your note.

Note: Some servers only support a limited range of newsgroups. The only way to know if the server supports a newsgroup is to try it! An updated listing of mail-to-news servers can be found by fetching the document at "http://students.cs.byu.edu/~don/mail2news.html". (See the "World-Wide Web By E-Mail" section below for help with this.)

TIP: SEARCHING FOR USENET NEWSGROUPS - Don't know the name of the newsgroup? To search for Usenet groups about "pets", for example, send e-mail to an Agora server (see WWW section) with this line in the message BODY:

send http://www.nova.edu/Inter-Links/cgi-bin/news.pl?pets

Another way to find newsgroups: Send e-mail to "liszter@bluemarble.net" with news "keyword" in the BODY if the message. (The quotes force an exact match.)

USENET SEARCHES

A service called REFERENCE.COM makes it possible to search USENET newsgroups for postings that contain keywords of interest to you. You can even "subscribe" and receive a daily list of newsgroup postings that match your search criteria. Send mail to "email-queries@reference.com" with HELP in the body of note for full details. A similar service called the Vigilant Information Filter can be reached by sending e-mail to "info@vigilant.bc.ca".

WAIS SEARCHES BY E-MAIL

WAIS stands for Wide Area Information Service, and is a means of searching a set of over 500 indexed databases. The range of topics is too broad to mention, and besides, you'll soon learn how to get the topic list for yourself.
A list of WAIS databases can be obtained by sending e-mail to a gophermail server with "Subject: get all" and these lines in the message body:

```
Type=1
Name=All WAIS Sources
Path=1/other/wais/all
Host=info.asu.edu
Port=70
```

Look through the returned list for topics that are of interest to you and select one to search. Specify your search term(s) on the Subject line, and clip out just the section of the returned gopher menu that corresponds to your target database. Use these lines and with Subject of "seafarer" :

```
Type=7+
Name=poetry.src
Path=waissrc:/other/wais/all/poetry
Host=info.asu.edu
Port=70
```

You will (hopefully) receive a gophermail menu in response listing the matching "documents". To retrieve the full text of a matching document, just make a selection from the returned gopher menu, and the referenced file will be sent to you. In my testing, WAIS by gophermail was not reliable. Often a blank menu was returned but repeated attempts did occasionally meet with success. You are more likely to find what you're after by using the webmail services listed in the next section.

WORLD-WIDE WEB BY E-MAIL

The World-Wide Web is the premier Internet navigational tool - a hypertext and multimedia system that lets you hop around the Net, read documents, and access images & sounds linked to a source. Have you ever heard someone say, "Wow, check out the cool stuff at http://www.somewhere.com/blah.html" and wondered what in the world they were talking about? Now you can retrieve WWW documents by e-mail using an Agora webmail server. All you need to know is the Uniform Resource Locator (or URL, that long ugly string starting with "http:", "gopher:", or "ftp:") which defines the address of the document, and you can retrieve it by sending e-mail to one of:

```
Agora Server Address         Location             Usenet Access?
---------------------------  -------------------- --------------
agora@dna.affrc.go.jp        (Japan)               Y
agora@kamakura.mss.co.jp     (Japan)               Y
getweb@info.lanic.utexas.edu (USA - alias for above address)
agora@picard.tec.mn.us       (USA)
agora@mx.nsu.nsk.su          (Russian users ONLY)
```

In the body of your note include one of these lines, replacing "<URL>" with the actual URL specification.
send <URL> rsend <return-address> <URL> (to override your return address) This will send you back the document you requested, with a list of all the documents referenced within, so that you may make further requests. To try WWW by e-mail send the following commands to an Agora server :

```
www
send http://www.w3.org
```

You'll receive in due course the Agora help file and the "WWW Welcome Page" which will include references to other Web documents you'll want to explore. There are some other webmail servers listed below, which run software other than Agora. Note that the GetWeb server at Healthnet can handle web pages which require you to fill in forms.

Address	Syntax	Comments
w3mail@gmd.de	GET <URL>	Send HELP command for more info
getweb@usa.healthnet.org	GET <URL>	Send HELP or HELP FORMS
wwwfmail@linux.netmor.com		Use 'Subject: info' for help
webmail@www.ucc.ie	GO <URL>	Same as webmail@curia.ucc.ie
web-mail@ebay.com	<URL>	Limited free searches - Defunct?
web@glr.com	<URL>	Defunct?

Note: The webmail servers are sometimes unavailable for days (or weeks) at a time without explanation. If you get an error or no reply, please retry in a day or so.

WWW SEARCH BY E-MAIL

There's a lot of great stuff out on the Web, but how do you find it? Well, just like Archie and Veronica help you search FTP and gopher sites, there are several search engines that have been developed to search for information on the Web. But until now, you had to have direct Internet access to use them. After a bit of research, I have found that it is possible to use several WWW search mechanisms by e-mail. Here are some sample queries that you can use to search via Lycos and WebCrawler. Any of these lines can be sent to an Agora server (see above) to perform a search. If you're not interested in frogs, then by all means feel free to use your own keywords.

For Lycos, append a dot to your keywords to force an exact match, or you will get a substring search by default. Separate words with a "+" sign.

```
http://www.lycos.com/cgi-bin/pursuit?query=frog.+dissection.
```

For WebCrawler searches you must separate words with a "+" sign. All searches are exact, no trailing dot required.

```
http://webcrawler.com/cgi-bin/WebQuery?frog+dissection
```

For a more detailed discussion of web searching by e-mail, use a webmail server (see above) to retrieve this document:
`ftp://ftp.netcom.com/pub/gb/gboyd/wsintro.faq`

MAILING LISTS

There are literally thousands of discussion groups that stay in touch using e-mail based systems known as "mailing lists". People interested in a topic "subscribe" to a "list" and then send and receive postings by e-mail. For a good introduction to this topic, send e-mail to: LISTSERV@vm1.nodak.edu In the body of your note include only this command: GET NEW-LIST WOUTERS

FINDING A MAILING LIST

To find out about mailing lists that are relevant to your interests, send e-mail to "liszter@bluemarble.net" with search "keyword" in the BODY if the message. (The quotes force an exact match.) Of course you must replace "keyword" with your own search word such as "marketing", "bicycles", etc.

Another helpful document which details the commands used to subscribe, unsubscribe and search mailing list archives can be had by sending to: `LISTSERV@ubvm.cc.buffalo.edu` In the body of your note include only this command: `get mailser cmd nettrain f=mail`

NEW IN THESE PARTS?

If you're new to the Internet, I suggest you subscribe to the HELP-NET list where you're likely to find answers to your questions. Send the command: SUBSCRIBE HELP-NET <Firstname Lastname> in the BODY of a note to LISTSERV@VM.TEMPLE.EDU, then e-mail your questions to the list address: HELP-NET@VM.TEMPLE.EDU

FINGER BY E-MAIL

"Finger" is a utility that returns information about another user. Usually it's just boring stuff like last logon, etc., but sometimes people put fun or useful information in their finger replies. To try out finger, send this line (in the message BODY) to a webmail server: `send http://www.mit.edu:8001/finger?<user@site>` Use one of the e-mail addresses below instead of `<user@site>` ...

```
nasanews@space.mit.edu      coke@cs.cmu.edu
quake@gldfs.cr.usgs.gov     copi@oddjob.uchicago.edu
```

"DIRECTORY ASSISTANCE" BY E-MAIL

"WHOIS" is a service that queries a database of Internet names and addresses. If you're looking for someone or you want to know where a particular Internet site is located, send e-mail with

```
Subject:    whois <name>
To: mailserv@internic.net
```

Try substituting "mit.edu" or the last name of someone you know in place of "<name>" and see what comes back! It should be noted that WHOIS is not a comprehensive listing of all Internet users. It contains mostly network administrators and some "notable" Internet figures. Another alternative name looker-upper is a database at MIT which keeps tabs on everyone who has posted a message on Usenet. Send e-mail to "mail-server@rtfm.mit.edu" and include this command ONLY in the BODY: `send usenet-addresses/<name>` Specify as much information as you can about the person (lastname, firstname, userid, site, etc.) to limit the amount of information that is returned to you. Here's a sample query to find the address of someone you think may be at Harvard University: `send usenet-addresses/Jane Doe` Harvard NETFIND is another more powerful search engine that uses a person's name and keywords describing a physical location to return a bunch of info

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